CLAIMS

1. A board supporting stage provided in an exposure system wherein a photomask and a board are stacked one on another in proximity or in contact with each other and said board is irradiated with light through said photomask for transfer of a pattern drawn on said photomask onto said board, said board supporting stage comprising:

negative pressure suction means for supporting said board in tight contact on a plane, said negative pressure suction means being provided avoiding a region where a board through hole is provided in said board to prevent suction of air via said board through hole.

2. A board supporting stage for an exposure system wherein a photomask and a board are stacked one on another in proximity or in contact with each other and said board is irradiated with light through said photomask for transfer of a pattern drawn on said photomask onto said board,

said board supporting stage comprising:

a flat-plate element supporting said board on a plane thereof by exerting suction on said board via a great number of negative pressure suction holes provided in said plane to bring said board into tight contact with said plane,

said flat-plate element including

a first element having an upper surface contacting said board, and a second element provided in contact with an under surface of said first element, said first and second elements being formed of flat plates each provided with the negative pressure suction holes for exerting suction on said board in positions corresponding to each other,

said negative pressure suction holes of said first element being arranged avoiding overlap with board through holes provided in said board, and

a third element provided in contact with an under surface of said second element, said third element having a header function for collectively connecting said negative pressure suction holes provided in said first and

second elements to a negative pressure suction source.

3. The board supporting stage for the exposure system according to claim 2, wherein said negative pressure suction holes provided in said first element are through holes that are formed, upon receipt of data showing positions of said negative pressure suction holes provided in said second element, data showing positions of said board through holes provided in said board, and data showing regions encircling said board through holes, by executing on a general-purpose computer or a dedicated processor a program for processing the data for determination of the positions in said first element where said negative pressure suction holes are to be formed, and forming the holes with a driller based on output data obtained as a result of the data processing.

4. The board supporting stage for the exposure system according to claim 2, wherein a positioning element such as a pin or stopper is used for alignment of said first and second elements, such that the positions of respective said negative pressure suction holes provided in said first element match the positions of corresponding said negative pressure suction holes provided in said second element.

5. The board supporting stage for the exposure system according to claim 2, wherein

said first element is formed of a plastic flat plate, plastic sheet or plastic film,

said second element is formed of a plastic flat plate,

said third element is formed of an elastic body like rubber, and

said third element is bonded to said second element with adhesive.

6. The board supporting stage for the exposure system according to claim 2, wherein said first element is supported by suction via a plurality of first element suction holes provided on an outer edge of said second element.

7. The board supporting stage for the exposure system according to claim 2, wherein said negative pressure suction hole of said first element for exerting suction on said board by negative pressure has a diameter equal to or different from a diameter of said negative pressure suction hole provided in said second element, and one or more of said negative pressure

suction holes of said first element are provided corresponding to respective one of said negative pressure suction holes of said second element.

8. The board supporting stage for the exposure system according to claim 2, wherein said header provided in said third element has a structure divided into at least two portions, to allow said header to switch suction regions according to the size of said board, or to make said header connectable to a plurality of said negative pressure suction sources.

9. A board supporting stage for an exposure system wherein a photomask and a board are stacked one on another in proximity or in contact with each other and said board is irradiated with light through said photomask for transfer of a pattern drawn on said photomask onto said board,

said board supporting stage comprising:

a flat-plate element supporting said board on a plane thereof by exerting suction on said board via a great number of negative pressure suction pads provided on the plane to bring said board into tight contact with said plane,

said flat-plate element including

a first element having an upper surface contacting said board, and a second element provided in contact with an under surface of said first element,

said second element being provided with said negative pressure suction pads in an arbitrary number of positions,

said first element being provided with a pad through hole for letting said negative pressure suction pad penetrate therethrough, in a region avoiding overlap with a board through hole provided in said board to prevent suction of air via said board through hole, and exclusively in a position where suction is desired to be exerted on said board via said negative pressure suction pad,

said negative pressure suction pad being shaped and sized such that a board suction plane thereof penetrates through said pad through hole of said first element and is retractable between a position where suction can be exerted on said board and a position at the same level

as an upper surface of said second element, and

a third element provided in contact with an under surface of said second element, said third element having a header function for collectively connecting said negative pressure suction pads provided in said second element to a negative pressure suction source.

10. The board supporting stage for the exposure system according to claim 9, wherein a plurality of said negative pressure suction pads are provided in positions corresponding to peripheries of a plurality of boards of different sizes.

11. The board supporting stage for the exposure system according to claim 9, wherein

said first and second elements are provided with, in addition to said negative pressure suction pads, negative pressure suction holes for exerting suction on said board in positions corresponding to each other,

said negative pressure suction holes of said first element are positioned avoiding overlap with the board through holes provided in said board to prevent suction of air via said board through holes, and

said header function has a function to collectively connect said negative pressure suction holes provided in said first and second elements to the negative pressure suction source.

12. The board supporting stage for the exposure system according to claim 9, wherein said negative pressure suction pad has an oval shape at least in a region contacting said board.

13. The board supporting stage for the exposure system according to claim 9, wherein said negative pressure suction pad includes an inserter provided inside thereof.